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## The material culture of Siraf – 8<sup>th</sup> to 11<sup>th</sup> centuries

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### Abstract

*The range of material culture found during the extensive excavations at Siraf presents a picture of a prosperous city trading with many places, but also with its own manufacturing capabilities. Glass and stone vessels were both manufactured at Siraf, and metal working took place within the city, probably in specific areas; spinning, dyeing, and presumably weaving, would have been household activities. The limited number and relatively small size of both iron and copper alloy objects, together with the very small amount of lead recovered, indicates that recycling of metals was routine and efficient, and this is further supported by the evidence for local metal working to produce finished items. It also suggests that the cost of the raw metal was a significant part of the price of any item as it was all imported. The position regarding glass is less clear, even though we know glass vessels were being made at Siraf, as the amount of fragmentary glass recovered suggests that recycling was less of a priority. Objects imported in a finished state made from materials that could not be recycled, such as soap stone vessels, were evidently routinely mended to extend their useful life where possible.*

*The extent of both sea and overland trade undertaken by the Sirafi merchants is reflected in the remains of the material culture found in the city. Some of the imported commodities were obviously common and everyday objects, such as soap stone vessels, while others reflect the rarer and probably luxury end of the spectrum – gold, silver and talc stone. Beads and spindle whorls were both found in materials that were locally*

*available or could only have been imported, showing a range of choice available to the local inhabitants who did not have to rely solely on what was made in the near vicinity. Although not the subject of this paper, this picture and the long distance nature of contacts and trade is reinforced by the quantities of Chinese ceramics found in the site from the 8<sup>th</sup> century onwards, and such oddities as the occasional piece of ostrich eggshell. The East African coastal area is also likely to be the source of the ivory and rock crystal found on the site, while India is the probably source for some of the glass and ceramics. Pottery made at Siraf has been found in Mombasa and other ports on the East African coast showing that Siraf was not only a major entrépôt engaged in moving commodities from place to place, but also exported its own goods to foreign parts.*

The material culture of Siraf is extensive and varied and reflects the position of the city as a major trading port, a city with wealthy inhabitants and its own manufacturing capabilities. Pieces of many thousands of objects were recovered during the course of the excavations undertaken in the later 1960s and early 1970s, but this material mainly represents the debris of people and their households that was occasionally lost, but which mostly had been broken and thrown away as it could not be recycled. Although only a small percentage of items amongst these thousands of fragments were complete, they nevertheless provide a unique insight into the possessions of Sirafis living in the city between the 8<sup>th</sup> and 11<sup>th</sup> centuries. This paper attempts to present a brief picture of items in everyday use and the personal possessions of the inhabitants. It does not cover the



later finds, such as those from Site E, structural evidence - like stucco, ceramic building materials or stone drains, or coinage and ceramic vessels.

Cities such as Siraf, situated on the coast, have far easier access to both finished items and raw materials from a wide range of far away places than inland towns. Several groups of objects found on the site, for example stone and glass vessels, worked bone and ivory, and beads, demonstrate the twin elements of imported and locally manufactured goods available in Siraf during its heyday.

### **Stone vessels**

Stone vessels were an important commodity at Siraf although this picture is probably biased to some degree because, like pottery, they could not be recycled and did not rot when thrown away. The two types of stone vessels found in large quantities over the whole area were made from either steatite (or soap stone) or a fairly soft semi-translucent milky-white stone called anhydrite. This is a semi-opaque off-white calcium sulphate stone (and has also been called gypsum and even alabaster) which outcrops in the vicinity of Siraf. Most of the anhydrite vessels are small, around 6 to 10cms in diameter, vessels over 12cms are rare, and none exceed 14cms in diameter. Unworked

or raw lumps of anhydrite were obviously easily available as there is ample evidence for its utilisation at Siraf. The debris from the manufacturing process shows that blocks of stone were roughly shaped and trimmed, and then turned on a lathe in the same way that wooden bowls were, resulting in the distinctive waste left behind. Both the working debris and finished items show that virtually all vessels were turned on a lathe. There are very few instances of even partial hand-finishing and no apparently totally hand-carved vessels.

The basic repertoire of the stone-turners includes shallow dishes, straight-side or inturned rim containers, and lids; other forms, such as a pair of probable oil lamps, were represented by only one or two examples. The most common vessels are small containers with straight or slightly flaring sides, and of these the nearly straight-sided version is the dominant shape. Nearly all of the small containers have some form of lathe-turned decoration, either raised cordons or ridges or fine-cut grooves, and completely plain vessels are rare. Apart from lathe-turned grooves decoration mostly took the form of small incised motifs or rocker-arm patterns. Incised motifs were sometimes cut through a layer of dark pigment applied in selected bands to the surface. These bands now appear either dark grey or purple.



Although anhydrite vessels were contemporary with some of the later types of imported decorated soap stone bowls the styles of decoration seen on these rarely seems to have been copied by the local craftsmen. For instance, ring-and-dot decoration was very rarely used, but this had largely stopped being used on soapstone vessels by the time anhydrite vessels were common. Two extremely similar lids or covers are the only two examples with this style of decoration, but these are also an unusual form within the repertoire.

The main period of utilisation and production of local anhydrite vessels was from the 9<sup>th</sup> century onwards, for perhaps a couple of hundred years. No actual workshops were found and most of the redeposited waste or debris came from leveling contexts. It was a common find in the make-up deposits of the housing complex at Site F which dates from the mid-9<sup>th</sup> century to the late 10<sup>th</sup> century.

### **Soap stone or steatite.**

Unlike the anhydrite vessels mentioned above soap stone vessels were all imported in a finished state. Virtually all these vessels were made from a fine grain, pale grey steatite which sometimes had a crystalline appearance. They seem to predate those smaller, locally-made anhydrite vessels and were certainly

available from the 8<sup>th</sup> century onwards. The precise source for the soap stone is unknown but two possibilities exist, either Northern Iran or Yemen, and the latter is probably more likely as it would have been easier to transport these heavy and fairly fragile objects by sea rather than overland. Three main types of vessels were imported into Siraf - tub-shaped vessels used for cooking, decorated bowls, and 'incense burners'. Other, less common, forms include lids or platters, triangular lamps, and one multi-wick lamp.

The earliest of the decorated bowls date to the early part of this period, the 8<sup>th</sup> century, and many came from the infill of the Great Mosque platform at Site B, with only a few examples from 9<sup>th</sup> century deposits. Typically these bowls have vertical sides and decoration over all of the outer surface of the walls, mostly comprising schemes made from a mixture of compass-drawn semi-circles or arcs and double ring-and-dot motifs. Rim diameters range between 9 and 21cms with most being between 18 to 20cms. Some of these decorative schemes are quite elaborate and although several are similar, none is identical. It is likely that these decorative items were widely traded as one similar to those at Siraf was found at Qasr al-Hayr East, Syria (Grabar *et al.* 1978). Slightly later than the ring-and-dot style are bowls with small narrow lugs and zones of incised lines.



Although a very few were found in 8<sup>th</sup> century deposits this was predominantly a 9<sup>th</sup> to 10<sup>th</sup> century style of decoration.

A few bowls and most of the lids have more deeply 'carved' decoration which results in a three dimensional effect. Chip-carved soap stone vessels are 9<sup>th</sup> century or later in date and none was found in the pre-803 AD deposits. Deep-carved repeating running scroll and pierced decoration is nearly always found as bands around the edges of flat vessels. Whether these are lids or platters is debateable, although some are small most have large diameters – around 20 to 24cms – but they do have a stepped lid-seating on the underside and the size would fit some of the bowls. However, this style of decoration has not been found on any of the bowls. The so-called incense burners all have the same basic form – a more-or-less square body with a leg on each corner which projects below the base, and a thick heavy straight handle projecting from the middle of one side. There are three basic forms – round section legs and a projecting side curve; trefoil legs with three flat-sided projections; square legs and flat projections on the sides. The inside of the first form is plain and circular, but the latter two forms have eight lobe interiors. Precisely what these were used for is unclear, but they were the second most common form of soap stone vessel after plain cooking vessels found on the site and many were mended



as the heavy handle obviously had a tendency to break away from the far thinner body. Occasionally these broken handles were subsequently reworked to make gaming pieces, possibly chessmen.

The cooking pots are plain, with rough vertical tooling on the exterior and smooth interiors, and most seem to have a pair of projecting horizontal flange handles, usually lower down the wall, fairly near the base, but occasionally near the rim. Rim diameters range between 15 and 28cms, with most being between 22 and 25cms; they vary between 10 and 21cms high with an average height of 12 to 14cms. Many had been extensively used over a long time as the degree of sooting on the exterior attests, and occasionally they had been so burnt that it affected the stone. These were obviously prized items as many had been mended with iron rivets or staples. In at least two instances cooking-vessels were mended on more than one occasion as they have both iron and copper alloy rivets. This degree of mending to extend their useful life suggests that these items were either expensive, or not easy to replace, and they were far more frequently repaired than the decorate bowls.

A very few vessels made from a different type of soap stone were found. This is darker in colour, with a finer grain and feels



heavier. These vessels obviously came from a different source and do not seem to have been part of the same regular trade.

One distinctive, but small, group of luxury imported finished stone vessels were made from talc stone and both white and black examples were recovered from deposits dated from the mid-9<sup>th</sup> to early 11<sup>th</sup> century. These included a probably pen tray with a reservoir for ink, a bottle, and a possible stand with square sides and large open circular inside, and were all single examples of their type. Two identical small containers with rilled sides of a similar size to those locally made in anhydrite, and a couple of lids, and the only forms represented by more than one example. Where these were made is uncertain, but there are sources of talc stone in both Iran and Saudi Arabia.

Other stone items include net weights and smoothing stones which usually utilised natural pebbles of various sizes; apart from the soap stone and anhydrite vessels additional domestic stone objects were pestles and mortars and some whetstones. Nearly all the mortars were made from pale yellow sandstone, tapering towards the base and a pair of lug handles at the rim. A common feature of the many mortars recovered, either complete or as fragments, was that they were intentionally discarded as they were worn-out through extensive use with the base missing.

## **Glass**

Glass was a very common find at Siraf at all periods, but particularly in the 8<sup>th</sup> to 11<sup>th</sup> centuries, indicating it was a common component of all households supplying most of the vessels for drinking in the form of small bowls or cups, dishes and bowls, jars of various sizes, jugs and ewers, small bottles or phials for liquids used in limited quantities, as well as much larger containers. Forms not associated with food or cosmetic use include lamps, inkwells, bleeding-cups, and small 'receivers' with one flattened side which were always made from dark blue glass. There were three forms of lamps, larger single lamps with several handles on the body - commonly called mosque lamps; small lamps with projecting stem bases of the type usually used in groups in polycandela; and lamps with wick holders, the only type of glass lamp that could have been used on a flat surface rather than suspended from a fitting. The small lamps used in groups, with rim diameters around 6-7cms and 7-10cms high, were the most numerous of the three types, but they were also the easiest to identify from small pieces which might well bias the percentages.

As the glass was mostly in a very fragmentary state it is inevitable that smaller vessels are probably over represented in the range of forms from the site as they are easier to reconstruct,



and some were even found complete. Most of these were small bottles or jars and a few were tiny, only 1.5cms in height. They ranged from plain, simple cylindrical phials to small bottles with marvered looped trails in contrasting colours, and some with elaborate cut decoration. Bowls for various sizes were common, ranging in size with the largest about 34cms in diameter, but these were the only form which was hardly ever decorated. Both shallow bowls with flaring sides and deeper, straight-sided bowls frequently had folded-over rims.

A city of the size of Siraf would have had its own glass blowing industry and it seems likely from the manufacturing debris found at the pottery manufacturing centre at Site D that glass vessels might also have been made there. A couple of reconstructable items show that the ubiquitous small bowls, probably used as drinking cups, were the most likely products to have been made there. They are the most common glass vessel form found on the site for several centuries, and these shallow glass bowls with near vertical sides, although similar in both size and basic shape (most have diameters between 8 and 10cms), have endless minor variety in their rim forms and so individual examples are difficult to date closely. The evidence from Site D suggests that most of the vessels found, and possibly made there, were plain and fairly simple in form with

external folded rims. A few pieces with shallow cut decoration were also found at Site D, but it is unclear if these represent cullet collected for recycling or could have been manufactured locally. The plain everyday vessels were mainly made from 'natural' coloured glass in a range of greenish colours deriving from impurities in the raw ingredients, and it is likely that the high quality vessels, usually made from good quality colourless glass, were imported rather than being made locally. Deliberately coloured glass was rare, with dark cobalt blue being the most common, followed by emerald green. A few pieces had distinct opaque red swirls from the copper colourant, but no complete vessels were found suggesting this was an accidental product of changing furnace conditions.

Most of the decorated vessels were either blown into a same-size mould, or had either deep facet cut or shallower cut linear designs. There was only a single piece of Islamic mosaic glass, from Site H, and two small pieces from shallow bowls with engraved line decoration. Decoration using trails or other applied features in a contrasting colour was not very common, neither was optic blowing. Amongst the deep facet-cut bottles are several examples of the well-known small molar flasks found on many sites of this period over a wide area, such as Fustat, Egypt (Scanlon and Pinder Wilson 2001), Beirut,



Lebanon (Jennings 1998/9) and Nishapur (Kröger 1995). Other examples of well-known types include bottles with wide flange rims and conical cut-decorated necks of a type found on the Serçe Limani wreck dated to c. AD 1025, or small bottles with cut arcades on the sides and faceted necks. Vessels with same size mould-blown decoration mainly comprised beakers or cups, bowls, and straight-sided bottles. Pattern designs included honey-comb decoration, repeating motifs, and Kufic inscriptions, but because of the way they these vessels were made they are much thinner than those with cut decoration and so are more fragmentary. It is likely that most of the vessels with more complex decoration were blown into two- or even three-part moulds, and many of these vessels also had decorated bases which often survive in a rather better state because of their thickness.

Another distinctive group of vessels, dating to the 8<sup>th</sup> century, is likely to have been imported and came from a restricted area of the infill of the platform of the Great Mosque at Site B. These were all made from dark blue glass and include wide bowls, bottles with thickened and flattened rims, jars with spiral trails around the neck, and the body of one phial. All the vessels of this group were well-made, with well-formed rims and the enclosed vessels often had modelled or tooled bases.

## **Worked bone, ivory and shell**

Many small items were made from bone and ivory, including spindle whorls used for spinning thread, gaming pieces, inlays, and dolls. Different types of shell were also utilised, as was coral, but the evidence for the use of shell mostly comes from the working residue in the form of shells abandoned part-way through their use.

Highly decorated whorls with flat tops and convex bottoms were a common find made from both ivory and bone. It has been suggested that these small decorative items were used as buttons, but a more likely use is that they were spindle whorls. They vary in diameter between 1.5 and 2.5cms in diameter with most centring around 2cms. The size of the central hole and the light weight of these whorls indicates that the spun thread was fairly fine. Both ivory and bone whorls have similar decoration comprising incised lines, mostly in the form of concentric circles around the whorl, and ring-and-dot motifs. The ring-and-dot motifs were either spaced singly around the circumference, arranged in chevrons or lines, and occasionally grouped to depict simple birds. Only four of the whorls have an additional motif, a stylised fern or tree. Examples with just line decoration were uncommon and completely plain whorls rare. There is no indication, however, that ivory was being worked at Siraf and it



seems probable that these items were imported as finished goods. Distaff spinning seems to have been a common occupation during all the period of occupation, and these spindle whorls, together with several groups of murex shells found in pits, attest to both spinning yarn and dyeing it. However, none of the finds can be directly linked to weaving.

Counters or gaming pieces were occasionally found - for such activities as board games, for example chequers or chess. Small circular containers, knife handles and a few pins all show that lathe-turning was also as a method for working bone and ivory and, like the spindle whorls, decoration was mostly limited to ring-and-dot and cut grooves. Only a couple of items had carved decoration – a rectangular plaque with a running animal and a small head. Traces of red paint survived in the ring-and-dot motifs on a probable knife handle showing that this type of decoration was further enhanced with the use of colour. Simple toys for children also utilised animal bones and sections of long bones either had faces painted on one end or were simply carved with indications for the eyes, nose and mouth. These would have had cloth tied around the lower part of the bone to make dolls. Other items include a single spoon with a small shallow bowl and the terminals of several unidentified objects.



Bone and ivory was also used to make inlays, mostly likely to have been set in wood and possibly either in boxes or furniture. These inlays were usually basically square and the most common form had a V-shaped notch cut in the centre of one side and a small central hole. Others had concentric circles set within the square frame and were similar to the gaming counters, but rather thinner. Working waste suggests that two different types of local shells also provided material for a similar function as several were found with cut diagonal flat faces that clearly show striations, indicating that they were sawn. These shells were all large with wall up to 6-8mm thick. A couple of the shells had several marks in a line down one side showing where the next cut would have been made to produce thin and flat sections of shell. Most of these partly worked shells came from the infill from the Great Mosque platform at Site B, but a couple were also associated with the buildings at Site F.

Surprisingly there is only limited evidence for mother-of-pearl being worked at Siraf and very few artefacts of this material were recovered. The species of oyster suitable for working mother-of-pearl is still found in the area today and is likely to have been readily available in the main Siraf period. Two flat finger rings with projects decorated with ring-and-dot motifs, a small plaque, and a few fragments with cut edges - which might



have been inlays - were the only items recovered. Rather more pieces of coral were found, including both red 'stick' coral and white coral, and most of these were pierced indicating their use as jewellery.

### **Beads and other items of jewellery**

Many beads and a number of pendants made from various types of stone are another indicator of the wide variety of materials coming into Siraf as items of trade, but some attest to the existence of a parallel local industry producing companion items. Stone beads of a wide variety of shapes were fairly common throughout the whole period of Siraf and were made from lapis lazuli, onyx, chalcedony, rock crystal, banded agates, and carnelian. Raw carnelian was occasionally found on the beach by members of the team during the course of the excavation and it seems likely, therefore, that most of the numerous carnelian beads were probably locally made. Other material used for beads include of few complete shells, lignite or possibly ebony, and coral. Beads were also frequently made from glass, but small bone, shell and ivory beads were very rarely found, but some fish vertebra were utilised to make beads. Although imported turquoise items were found these were usually ring setting rather than beads. One particularly fine ring setting was made from banded agate and had an extremely fine

cut Kufic inscription cut through the thin lighter colour top layer in a cameo effect.

Ten seal beads were found and four of these came from Site O which yielded a relatively small finds assemblage. Two of these were virtually identical with a lion-like animal carved within a raised rectangular surround; both were made from an unusual dark plum-red stone. All the others were either made from carnelian or a type of onyx. Motifs included ibex, horse-like animals and stylised line figures.

### **Metal working**

As well as the items of iron and copper alloy found at Siraf there is also evidence for working both iron and copper alloy from the various sites. A number of the distinctive bun-shaped pieces of waste iron which form in the base of iron smithing hearths and a crucible that was used for melting copper alloy were recovered. Although we know that the Sirafis must also have been working lead, in or near the area of the city, to produce the local lead coinage we found no evidence for this. Very little lead was found, mostly formless scraps of waste, and the only identifiable objects were two plumb bobs and a rim fragment with small stamped circles along the edge, which might be part of a vessel.



Iron objects did not survive particularly well because of proximity to the sea and the effects of salt in the soil on the metal. As usual, nails of various types and sizes were by far-and-away the most common find, but occasional small structural fittings and a few knives were found. The most significant iron object recovered was a largely intact brazier found in the Extension of the Great Mosque. Many of the nails were substantial, some with large domed heads and short shafts were used as door studs while others could only have been used on large timbers, and some were of the type still used in the construction of boats.

Copper alloy was used to make objects for a wide variety of uses, for personal items, fittings for either furniture or boxes in the form of hinges and straps, other objects include many small weights, a few spoons and one knife, small pans from balance scales, and bells of various sizes. Several of the bells were the very small size often attached to birds of prey used in falconry. Many of the items found were personal objects, such as both elaborately decorated and plain kohl sticks, small scoops and tweezers, or pieces of jewellery – large dress pins, finger rings, bracelets, pendants, and earrings; one of the finger rings had a turquoise setting but most were plain or with integral bezels. A number of the items found had been part of composite objects,

such as knife guards or bindings. The noticeable factor of nearly all the pieces or complete items of copper alloy found at Siraf is their small size, with very few pieces of any size. Only a few bits of larger items were found, most of which were probably parts of vessels, indicating that larger items that could not be mended and reused were regularly melted down and recycled.

Precious metals items were very rare finds, but this is not surprising in an urban situation where most such items would represent occasional casual losses. One such apparent casual loss was a pair of gold earrings each with a single pierced pearl. These were found looped together, a standard way to keep such small items together when not being worn, and could easily have fallen from a pocket. The other items were a bead and a finger ring with a setting for a bezel. Nearly all of the small number of silver items recovered were also finger rings, and a couple were small in size suggesting they belonged to children. Only one was made from a plain band, the others had setting for stones.



## Bibliography

Grabar, O, *et al.* 1978 *City in the desert: Qasr al-Hayr East*, Cambridge, Massachusetts: Harvard university Press, 138-47.

Jennings, S 1998/9 Post Roman Vessel Glass from the Souks Excavation - BEY 006. *Bulletin d'Archéologie et d'Architecture Libanaise* 3, (issued in 2001) 85-93.

Kröger, Jens 1995 *Nishapur: Glass of the Early Islamic period*. The Metropolitan Museum of Art, New York.

Scanlon, George & Pinder-Wilson, Ralph 2001 *Fustat glass of the early Islamic period: finds excavated by The American Research Center in Egypt 1964-1980*. Altajir World of Islam Trust, London.